The More Things Change . . .
A review of THE SEVEN LAWS OF TEACHING (1886), by John Milton Gregory
Rich Haglund[1] - August 2010

> We can carefully observe and learn from an infant's behavior. He has a complete human body with eyes, hands, and feet with all the organs of sense, action and locomotion, yet he lies helpless in his bassinet or baby bed. He laughs, cries, feels, and seems to perceive, remember, and will. We can conclude from our observations that an infant has the attributes and mental faculties of an adult, but he does not have the *power* and *ability* to use them in a mature and controllable manner.[2]

The first goal of teaching, then, "is to communicate the knowledge a student needs in gaining other knowledge, to stimulate the student to love learning, and to form in the student the habits and value of independent study."[3] The long-term goal of teaching is "a full-grown physical, intellectual, and moral adult who has the intelligence and values to make life useful and happy, and to continue learning from all life's experiences and from all available knowledge sources."[4]

John Milton Gregory[5] wrote THE SEVEN LAWS OF TEACHING in 1886, long before successful people acquired seven habits.[6] But had he published the laws today, they would appear similar to ideas in current publications of education researchers and policy advisors. This review is based on A 21ST CENTURY PERSPECTIVE OF THE SEVEN LAWS OF TEACHING, edited by Charles E. Walker and Brian E. Walker in 2006. The editors rephrased selected portions "to better correspond with the writing style used by modern writers, while carefully removing obsolete or uncommonly used words and phraseology."[7] They also combined and added some sentences to make the work "more interesting and thus more informative and instructional."

Though focused mainly on the foundational principle of effective teachers from the State Board of Education's Master Plan, Gregory's ideas have clear application for effective school leaders, the design of rigorous, relevant curriculum, and the implementation of sufficient resources.

---

[1] Rich Haglund is General Counsel to the Tennessee State Board of Education. The views in this review do not, however, necessarily represent the views of the State Board. Additional reviews are available online at http://info.tnanytime.org/sbe/?p=267.

[2] John Milton Gregory, A 21ST CENTURY PERSPECTIVE ON THE SEVEN LAWS OF TEACHING 1 (Charles E. Walker and Brian E. Walker, eds., 2006) (1886).

[3] *Id.* at 3.

[4] *Id.*

[5] Gregory (1822 – 1898) attended public schools in New York and Union University. He was an ordained Baptist minister and head of a private high school in Detroit. He founded the Michigan Journal of Education and served as Superintendent of Public Instruction for the state of Michigan. In 1864, he became president of Kalamazoo College. He served as president of Illinois Industrial University (now the University of Illinois) from 1867 until 1880. SEVEN LAWS at xvii.

[6] Or even an 8th habit! See, Stephen R. Covey, THE 7 HABITS OF HIGHLY EFFECTIVE PEOPLE (1989); THE 8TH HABIT (2004).

[7] SEVEN LAWS at xi.

Effective Teachers

Teaching, Gregory explains, "is the communication of knowledge . . . [but] not in the sense of transmitting a mental impression from the teacher to the student, but rather in the sense of helping the student reproduce the same knowledge as that of the teacher, and thus to make it common to both the teacher and the student."[8] To "discover the law" of teaching, Gregory analyzes its "distinct factors or elements: (1) two actors—a teacher and a learner; (2) two mental factors—a common language or medium of communication and a lesson, truth, principle, or art to be communicated; and (3) three functional acts or processes—that of the teacher, that of the learner, and that of the final or finishing process to test and secure the result."[9]

Here are the seven laws, stated as rules:

1. **Know thoroughly and familiarly the lesson you teach. In other words, teach the lesson from a full mind and a clear understanding.**
2. **Gain and keep the attention and interest of the students. Refuse to teach without attention.**
3. **Use words understood in the same sense by both the teacher and the student. The language should be clear and vivid to both.**
4. **Begin with what is already well known to the student about the lesson or subject and proceed to the unknown material by single, easy, and natural steps. Let the known explain the unknown.**
5. **Excite the student's mind to action by keeping his thoughts as much as possible ahead of the teacher's expressions. Develop in the student an attitude of seeking and discovering truth.**
6. **Require the student to reproduce in thought the lesson he is learning, thinking it out in its parts, proofs, associations and applications until he can express it in his own words.**
7. ***Review, review, review,* correctly reproducing the old material, deepening its impression with new thought, discovering new applications, correcting false views, and completing the true. Always take the time to conduct timely reviews.[10]**

Classroom management was a footnote for Gregory: "Classroom order is a prerequisite to good teaching, and, in most instances, good teaching produces classroom order."[11]

1. The law of the teacher: The teacher must know that which he would teach.[12]

Gregory describes four levels of knowledge. At the first level, something is known vaguely and recognized "only when another person tells it to us." At the second level, we can recall it or describe it generally. At the third level, we can "readily explain, prove and illustrate it." And, at the fourth level, "We know and vividly understand a truth in its deeper significance

[8] *Id.* at 6.
[9] *Id.* at 7.
[10] *Id.* at 9-10.
[11] *Id.*
[12] *Id.* at 18.

and broader associations to the extent that its importance, excellence, or beauty impresses and inspires us."[13] Until a teacher's content knowledge is at the third fourth level, a teacher will likely be without her most important tool. "The power of illustration—the most important, powerful tool in the teacher's art toolbox—comes only from a clear and familiar understanding of knowledge."[14]

A teacher with thorough knowledge of the content can facilitate student-led learning:

> When a teacher thoroughly knows and understands the lesson or subject he teaches, it activates all his mental powers and gives him the freedom to make use of those powers. Instead of the hurry and worry of having to glean from the textbook the answers to the questions he has asked, the teacher who knows his lesson is at home on familiar ground in his thoughts and presentation. He can watch with ease the efforts of his class and direct with certainty their thoughts and interpretations. He is ready to recognize and interpret their first faint glimpses of truth, to remove the obstacles from their path that hinder learning, and to aid and encourage their struggling search for truth by using a skillful hint that flashes a revealing light into the thick darkness of misunderstanding.[15]

One way school leaders can facilitate the integration of technology and other sufficient resources is to make sure teachers have and use opportunities to master their subjects. Then they will not recoil at the thought of using a new tool because their "mental powers" aren't freed from concern over mastering the material.

A teacher who "thoroughly knows and understands the lesson or subject [she] teaches" will have mental powers (free hard disk space) to contemplate and see ways to use current technology to facilitate student learning. She will be unafraid to "aid and encourage" students' pursuit of understanding "by using a [smartphone or software tool]" that . . . "helps to give the student [who can use those tools in his sleep] needed confidence and interest in the subject studied."

2. The law of the learner: The learner must attend with interest to the fact or truth to be learned.[16]

Gregory describes four levels of attention.[17] Passive attention is "too common to need explaining. It is seen in some students in nearly all classrooms . . . and in most classes, it occurs at the beginning of the lesson. The students sit at ease waiting to be motivated and inspired by the teacher, instead of sensing the responsibility and duty to motivate themselves."[18] Passive attention "involves no effort of the will,"[19] and a student passively attentive will be controlled

[13] *Id.* at 19.
[14] *Id.* at 20-21.
[15] *Id.* at 22-23. Gregory also encourages teachers to take several steps to make the content relevant to students: "Locate in the lesson its analogies and likenesses to more familiar truths, facts and principles." *Id.* at 24. "Try to show the relation of the lesson to the lives and duties of the students. The practical value of truth lies in these relations." *Id.* at 25.
[16] *Id.* at 31.
[17] *Id.* at 33.
[18] *Id.* at 37.
[19] *Id.*

not by the learner's mind but by "the learner's surroundings and the things happening in those surroundings."[20]

Though Gregory clearly notes that students must take responsibility for any true learning to occur, he suggests that teachers often teach children to be merely passively attentive. If we teach in a manner modeled after filling buckets instead of lighting fires, if we give assignments that do not require students to reason independently and use higher cognitive skills, we may facilitate mere sleepwalking.[21] If students learn from an early age, or from the beginning of a term, that teachers are the experts and will dispense all the knowledge, should teachers be surprised when the students' sense of responsibility for learning never develops, or even fades?

Even compelled attention—"an effort of the will in obedience to some command of authority or bothersome duty, . . . is not attention at all, even though it is an act of the will. The face may look attentive, but the mind tends to wander to things more pleasant than the object or lesson at hand."[22] A teacher violates the law of the learner when, "feeling or displaying little or no fresh interest in his work, [the teacher] attempts to compel attention that he is unable to attract. In doing this, he wakes up the students' disgust by his dull and dry teaching when he should be inspiring delight by using his intelligence, understanding and compassion.[23]

Active attention "does what *needs* to be done as opposed to what one *wants* to do."[24] It is longer lasting than passive or compelled attention and . . . compels the student to focus upon predetermined goals, regardless of the environmental distracters, even when the goals lack interest or desirability."[25]

"Attracted attention," the highest of the four levels, "comes from a sincere and genuine desire to learn. It occurs without conscious effort and with eager delight. . . . It is mental hunger seeking its food, and delighting itself as if at a feast."[26]

Because the capacity for attention varies with mental age and can move from one level to another, [27] teachers have a duty to attract attention of students by connecting the subject to their current or future interests. "Another source of genuine interest is found in the connection of the lesson with something in the student's previous studies or life experiences. An even richer source of interest is found in his future duties and potential employments."[28]

3. The law of the language: The language used in teaching must be common to the teacher and the learner.[29]

Effective teachers understand that "it is not what the speaker expresses from his mind, but what the hearer understands and reproduces in *his* mind that measures the effectiveness of the language used."[30] Thus, "the best teachers use well-chosen words that raise the clearest

---

[20] *Id.*
[21] *Id.* at 36. "We can lift a sleepy child to his feet by sheer strength, but unless we can awaken him to walk by himself, his progress will be slow and uncoordinated. The same truth holds in mental attention."
[22] *Id.* at 34-35.
[23] *Id.* at 49.
[24] *Id.* at 35 (emphasis in original).
[25] *Id.*
[26] *Id.* at 35-36.
[27] *Id.* at 36-37.
[28] *Id.* at 41.
[29] *Id.* at 52.
[30] *Id.* at 54 (emphasis in original).

images and excite the highest action in their students' minds."[31] Teachers should "obtain from the students as much as possible their knowledge of the subject or lesson . . . [and] express [their] thoughts as much as possible in the words used by [their] students."[32]

Effective teachers allow students to formulate ideas in their own words. "[T]o convert talking into thinking, there must be an independent and original effort by the student, not the parroting repetition of other people's words."[33] As students formulate the concepts in their own minds and express them in their own words, teachers are likely to discover inaccuracies in the students' understandings that they would not discover if they did not allow the students to articulate the ideas in their own vernacular.[34]

4. The law of the lesson: the truth to be taught must be learned through truth already known.[35]

"Every new fact or truth must be brought into connection or comparison with facts and truths already known before it can fully reveal itself and take its place in the widening circle of knowledge. Thus, the very nature of knowledge compels us to seek the unknown through the aid of the known."[36] The challenge for teachers, of course, is finding the known for each student "that will help make the new, unknown learning experience more meaningful."[37]

Without connecting the new, unknown principle to something the student already knows, the teacher "violates a law of nature (the Law of the Lesson) that is as inflexible as that which forbids vision without light, hearing without sound, or feeling without touch."[38]

> The student's mind must work with the material it possesses in comparing, imagining, judging, and reasoning, and in applying knowledge to plan, criticize, express, or execute one's thoughts. Hence the power of any truth or object as a mental stimulus depends in each case upon the number of related truths and objects that the mind already knows.[39]

Psychologist Daniel Willingham, using a medium unimagined to Gregory—YouTube—emphasized the same thing. "Teaching content," Willingham explained, "is teaching reading." Why is this? In line with Gregory's reasoning, Willingham gives two reasons: First, "we leave out information when we write. The reader is assumed to know certain things." Second, "without understanding, content is often ambiguous."[40] The value in making these kinds of connections between the known and the unknown is this: "The thoroughly mastered lesson throws its illuminating light over the next lesson and in some instances lessons to come."[41]

---

[31] *Id.* at 55.
[32] *Id.* at 60.
[33] *Id.* at 56. Gregory wrote those words (the "original effort") after repeating a phrase from a 1742 poem, *The Complaint*, by Edward Young: "Thoughts disentangle passing o'er the lip."
[34] SEVEN LAWS at 62.
[35] *Id.* at 68.
[36] *Id.* at 71.
[37] *Id.* at 72.
[38] *Id.* at 74.
[39] *Id.* at 88.
[40] Dan Willingham, Teaching Content is Teaching Reading," available at http://www.youtube.com/watch?v=RiP-ijdxqEc (last viewed August 27, 2010).
[41] SEVEN LAWS at 75.

5. The law of the teaching process: Excite and direct the learner's mental powers and tell him nothing that he can learn himself.[42]

The teacher's role is to create the conditions for learning. The teacher's "major teaching purpose is . . . arousing those faculties of cognition, imagination, and reasoning whose actions must always be self driven. . . . All telling, explaining, and other teaching acts are useless unless they excite and direct the student's mental powers to action."[43] Over 100 years later, Steven Covey wrote that effective leaders "set up the *conditions of empowerment* and then . . . get out of people's way, clear their path and become a source of help as requested."[44]

Unfortunately, teachers often get in the way simply by offering too much help. "It could be said that he teaches best who teaches least; or, better still, he teaches most whose students learn the most without his teaching."[45] Dan Meyer, a high school math teacher, offered a solution to this problem.[46] He noted that curricula are usually not designed in a way to get students thinking about mathematical reasoning in the world around them. Even materials that provide problems in a real-world setting show the students the mathematical elements before the students have an opportunity to define what the inputs might be. Meyer explained that he has learned, after several years of teaching, to be *less* helpful, to put the mathematical framework onto problems "only as the students give me [the teacher] permission to do so."[47]

"True teaching," Gregory concludes, "is not just that which gives knowledge, but that which stimulates students to gain knowledge."[48] This is more difficult to do in an age when students spend so much time watching television. Standard television dramas resolve complex problems in simple ways, and usually in just 45 minutes! Television writer David Milch recently noted that watching television half the day "creates impatience . . . with irresolution."[49] Just as Milch tries to "tell stories which engage those issues in ways which can engage the imagination so that people don't feel threatened by [irresolution]," Meyer is trying to teach in a way that helps students be comfortable with irresolution so they can then work out problems on their own.[50]

Because it is only when the mind does its own work that knowledge becomes permanent,[51] an effective teacher is anxious to stimulate his students' minds. "Like a skillful engineer who knows the power of his engine, he chooses to stand and watch the splendid machine work and marvel at the ease and vigor of its movements. It is only the unskillful and self-seeking teacher who prefers to hear his own voice in endless talk, rather than watch and direct the working of his students' thoughts."[52]

---

[42] *Id.* at 82.
[43] *Id.*
[44] Stephen Covey, THE 8TH HABIT: FROM EFFECTIVENESS TO GREATNESS 264 (2004).
[45] SEVEN LAWS at 84.
[46] Dan Meyer, "Math Curriculum Makeover," TEDxNYED, April 12, 2010, available at http://tedxnyed.com/ (last viewed June 14, 2010).
[47] *Id. See also* Dan Meyer, "How to Save Math Education," Oct. 1, 2009, available at http://www.oreillynet.com/pub/e/1450 (last viewed June 14, 2010).
[48] SEVEN LAWS at 84.
[49] Quoted in Dan Meyer, "How to Save Math Education," Oct. 1, 2009, available at http://www.oreillynet.com/pub/e/1450 (last viewed August 30, 2010); interview of Milch available at http://mitworld.mit.edu/video/383/ (last viewed August 30, 2010).
[50] Dan Meyer, "How to Save Math Education."
[51] SEVEN LAWS at 92.
[52] *Id.* at 95.

Effective leaders should model this process with teachers. Just as the effective teacher facilitates his students' mental engagement, an effective leader facilitates the personal learning and development of her teachers, rather than seeing herself as a one-way dispenser of evaluations and wisdom.

6. The law of the learning process: the learner must reproduce in his own mind the truth to be learned.[53]

Teachers create the environment for learning, but students are responsible for their own learning.[54] "Contrary to what is commonly understood or believed, the work of education—the acquiring of knowledge—is the work of the student and not that of the teacher."[55]

The student's work moves among five stages of learning:

1. Recite information verbatim.
2. Articulate understanding.
3. Translate thoughts into one's own words.
4. Seek verifying evidence.
5. Determine the uses and applications of knowledge.[56]

The achievement gap is arguably a function of the engagement gap. "No lesson," Gregory writes, "is learned to its full meaning until it is traced to its connections with nature and life."[57]

No student is likely to be interested in the lesson unless connections—the uses and applications of knowledge—are discovered. Students are likely to remain disengaged without seeing connections between what they are asked to do in school and what they already know and/or are interested in outside of school. We need not take Gregory's word for this, however. There is plenty of modern scholarship on the topic.

A 2006 University of Indiana study surveyed high school drop outs. Many students who dropped out of high school reported that they had been bored in class because the "material wasn't interesting" and they "didn't see the value in the work [they were] being asked to do."[58] Scholars writing about online education found that the ability of students to find immediate relevance in their coursework motivates them to delve further and sustain their level of participation in the course. Students gain a better understanding of the material when they can link what they are learning with what they are doing.[59] Psychologists studying motivation in students and athletes have written that "[t]his enjoyment and personal connection with the material may facilitate attention, cognitive processing, effort, and subsequent interest."[60]

---

[53] *Id.* at 104.
[54] See Covey's comment, infra p. 6, about leaders creating conditions of empowerment.
[55] SEVEN LAWS at 104.
[56] *Id.* at 105-106. The pace students ascend through these stages varies, Gregory notes, by mental age and capacity.
[57] *Id.* at 106.
[58] Ethan Yazzie-Mintz, *2006 High School Survey of Student Engagement, 5*, Indiana University 2006.
[59] Fisher & Baird, *Online learning design that fosters student support, selfregulation, and retention*, Emerald Publishing Group, Vol. 22, No. 2, 2005.
[60] Hulleman, Durik et. al., *Task Values, Achievement Goals, and Interest: An Integrative Analysis*, Journal of Educational Psychology 2008, Vol. 100, No. 2, 398–416 (399).

7. The law of review: The completion, test, and confirmation of teaching must be made by periodic reviews.[61]

Oh, no! Teachers were told to teach to the test even in the 19th Century!

The three main goals of reviews are, "(1) to *perfect* knowledge, (2) to *confirm* knowledge, and (3) to *render* knowledge ready and useful."[62] A review, Gregory emphasizes, is more than repeating concepts (something machines can do). A review "involves fresh conceptions and new associations, and it brings an increase of mental ability and intellectual power."[63] In one of my college courses, an international relations course called Power and Legitimacy, the final exam required us to answer a novel question, using material we had previously read and analyzed in class. Taking the exam was essentially philosophizing for an hour or two. The professor was able, through our citation of works and application of ideas from those works in our reasoning, to confirm our knowledge. As students, we perfected our knowledge and made it more ready for future use.[64]

Why is review so important? Even with information that is exciting and relevant at first glance, students are not likely to gain a deep understanding. "A new lesson or fresh topic *never* reveals all its truths on the first reading or when it is first studied. Its novelties usually dazzle the mind and distract the attention."[65] Only "after repeated visits" do "things begin to stand out very clearly in our minds . . . , only then will [we] come to a true and vivid understanding of the lesson's meaning."[66]

If a standardized test at the end of the year is the only attempt to help perfect, confirm and make knowledge ready and useful, the teaching and the learning are likely to be unappealing to the teacher and her students. "The delay of all reviews until the end of the first grading period or semester when the lessons are almost forgotten, or even worse, totally forgotten," is one of the serious violations of the law of review.[67] "The review amounts to nothing more than poor and hurried relearning with little interest and less profit."[68] Similarly, reviews that are simply "a boring repetition of the same questions and answers that were originally used . . . is a review without power, a review in name only."[69]

---

[61] SEVEN LAWS at 115.
[62] *Id.* at 115-116.
[63] *Id.* at 116.
[64] The whole semester had required me to own the learning process. It was challenging but more rewarding than other classes in which the learning was at one of Gregory's lower stages. The class was a mix of undergraduate and graduate students. In one discussion, I had one of my proudest moments as a student. We were discussing The Grand Inquisitor, a chapter in The Brothers Karamazov, by Fyodor Dostoevsky (1880). The professor asked us what the cardinal's dilemma was. I had recently seen the remake of the old film, *Sabrina*, and I suggested the cardinal's dilemma was similar to that faced by the character Linus Larrabee as he contemplated marriage. As I began explaining the connection I saw, some of the older (presumably graduate) students snickered a bit. But they stopped laughing when the professor said that I had precisely described the dilemma. No wonder, you might say, I found the test in that class enjoyable! I used the known to learn the unknown and reproduced the truth to be learned in my own mind. (I won't explain the connection I saw. I'll let you seek that truth yourself!)
[65] SEVEN LAWS at 117.
[66] *Id.*
[67] *Id.* at 127.
[68] *Id.*
[69] *Id.*